DOCUMENT RESUME

ED 241 255 SE 041 791

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TITLE "Numbers, Numerals, Numeration": Activities Using Numeration Cards with Emphasis on Place Value, 100 Board Activities, and Number Words. (Grades 1-4.) Title I Elementary Mathematics Program.
INSTITUTION Des Moines Public Schools, Iowa.
PUB DATE 79
NOTE 18p.
PUB TYPE Guides - Classroom Use - Guides (For Teachers) (052)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Elementary Education; *Elementary School Mathematics; Instructional Materials; Learning Activities; *Mathematics Instruction; *Number Concepts; *Numbers; Reinforcement
IDENTIFIERS Elementary Secondary Education Act Title I; Numeration Tasks; PF Project

ABSTRACT

Mathematics activities and materials for teaching and reinforcing number concepts are presented. The activities, which rely primarily on number cards, are divided into the following sections: (1) sets less than ten; (2) the teen numbers; (3) sets and numerals to 100; (4) numeration; and (5) words that represent numbers (e.g., "one=1"). An inventory of number cards needed for the activities is included along with samples of the following number cards: picture cards representing the numbers 1 through 19; picture cards representing sets of ten; expanded numeral cards for teen numbers (e.g., "10+1," "10+2," etc.); and overlay cards for teaching place value up to the thousands place. Des Moines (Iowa) Performance Objective numbers which relate to the activities are listed on the left of each page. (DC)

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Numbers
Numerals
Numeration

SE041791

ACTIVITIES USING NUMERATION CARDS

DES MOINES INDEPENDENT SCHOOL DISTRICT

1800 Grand Avenue

Des Moines, Iowa 50307

"NUMBERS, NUMERALS, NUMERATION"

Nancy Oxberger
Sherry Sollenbarger

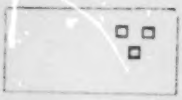
Activities using numeration cards with emphasis on place value, 100 board activities, and number words. (Grades 1 - 4)

Title I Elementary Mathematics Program

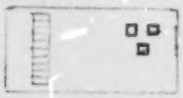
1979

- Inventory of Numeration Cards -

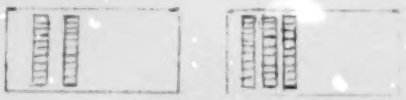
*1. Blue picture set cards 1 through 9.



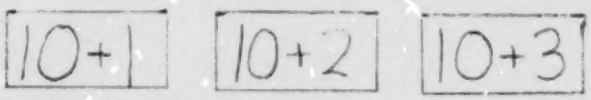
*2. Blue picture cards 11 through 19.



*3. Blue picture cards showing sets of ten.

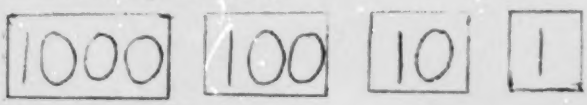


*4. Blue expanded numeral cards for teen numbers.



5. Pink numeral cards 0-100.

*6. Yellow overlay cards.



7. Green word cards:

   a. Number words 1 through 19

   b. Number words for tens, (ten, twenty, thirty...)

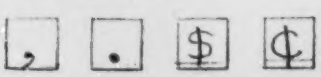
   c. Words for hundred, thousand, million

   d. Words for ones, tens, hundreds

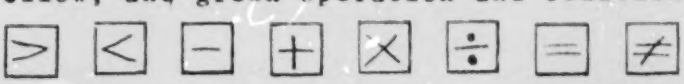
   e. Words for tenths, hundredths, thousandths.

   f. Word "and"

8. Symbol cards



9. Pink, yellow, and green operation and relation symbol cards.



Note: The asterisk denotes the cards included in this handout for your use.

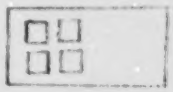
Teaching and Reinforcing Activities for Sets Less than Ten

Using the blue picture set cards 1 through 9 have the student:

1. Count the number of squares on each card.

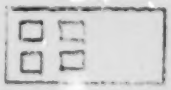
*Logic and Sets K-7

2. Form a set of objects equivalent to the number of squares on the card.



Logic and Sets A-9 A-10

3. Form a set of objects having <u>exactly</u> one more or one less member than the set of squares on the card.



4. Compare two or more cards by indicating which has more (or less) members or how many more (or less) members.

Logic and Sets A-13

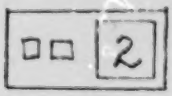
5. Place the cards in sequence from least to greatest.

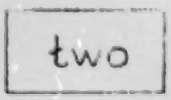
6. Indicate which cards have an even (or odd) numbered set.

Using the blue picture cards, the yellow numeral cards 1 through 9, and the green number word cards have the student:

Numeration A-12

1. Match the set, numeral, and the number word.

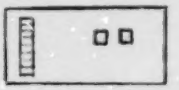


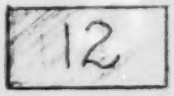


*Note: The Des Moines Performance Objective strands and numbers which relate to these activities are on the left of each page.

Teaching and Reinforcing Activities for the Teen Numbers

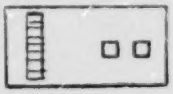
Using the blue picture cards, and the pink numeral cards 11 through 19





have the student:

1. Match a model (vacuum form) with the set card.

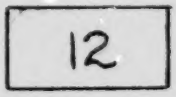


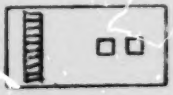
2. Indicate how many tens and ones on each card.

3. Match the numeral with the set card.

Numeration A-7

4. Arrange the numeral card and/or the set cards in order from least to greatest. Using a pink numeral card, match it to the blue set card.

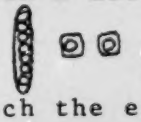


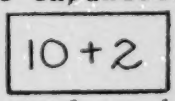


Using the blue picture cards, the blue expanded numeral cards, and the pink numeral cards, have the student:

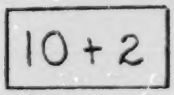
Numeration A-6

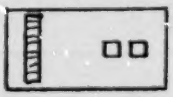
1. Match a model with the expanded numeral card.



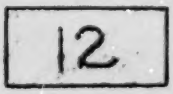


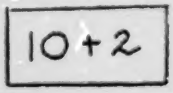
2. Match the expanded numeral card with the set card.

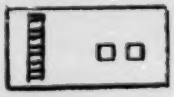




3. Match the standard numeral card with the expanded numeral and the set cards.



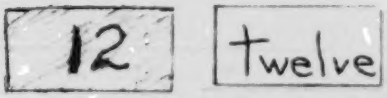




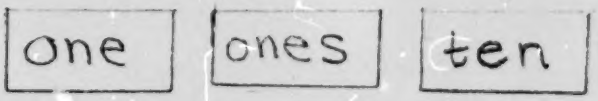
4. Name orally standard numeral for the expanded numeral card.

Using the green word cards with the cards previously introduced, have the students:

1. Match the numeral and word cards.

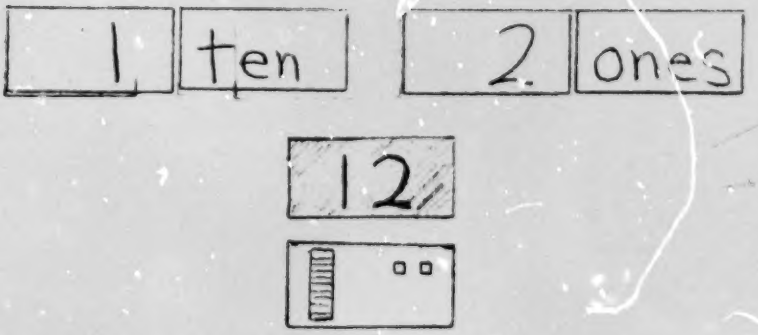


2. Match numeral, expanded form, set card, and number word:

3. Use the cards 

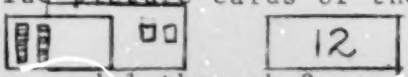
,

with the set cards, and the numeral cards and match:



Teaching and Reinforcing Activities for Sets and Numerals to 100

Using the blue picture cards of the



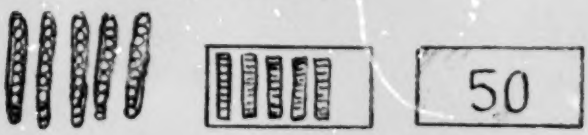
sets of 10's, and 1 through 9 cards, and the pink numeral cards, have the student:

Numeration A-14

1. Count sets of 10 using the model, and then the picture card 5.

Numeration A-75 A-16

2. Match models with sets of 10 picture cards, and the numerals.

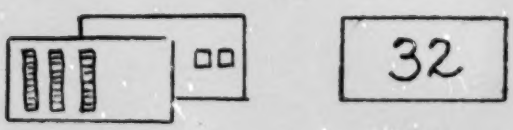


Numeration A-17

3. Name orally and count the numbers 1 to 100.

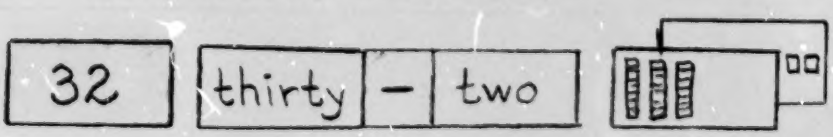
Numeration B-20 B-21

4. Match the sets of tens and ones picture cards to the numeral cards.

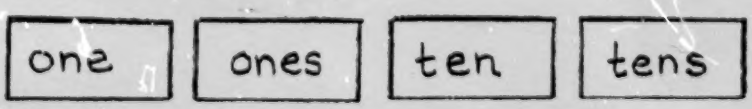


Using the green number word cards with the cards previously introduced, have the student:

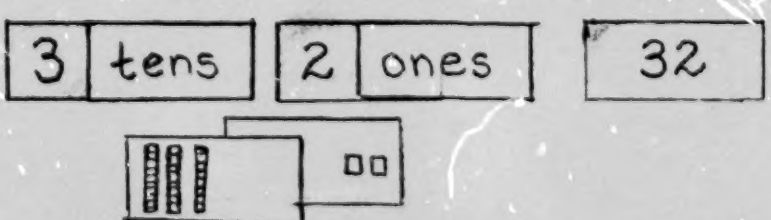
1. Match numeral, number word, and set cards.



2. Use word cards



with the set cards and the pink numeral cards.



Using the pink numeral cards (1 through 100) on the number board (or bulletin board), have the student:

Numeration B-23 B-26

1. Orally count by 2's, 3's, 5's, and 10's (try starting with 1, 2, 3, etc.)

Numeration B-31

2. Sequence any subset of numerals from least to greatest.

Numeration B-35

3. Identify odd and even numbers.

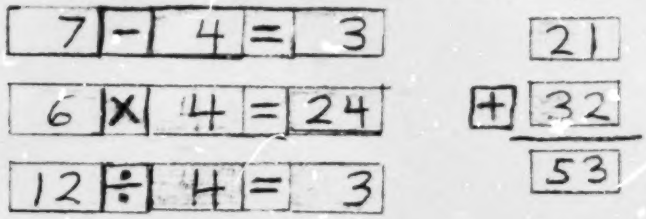
4. Indicate which numeral represents a greater (or less number of objects.)

NUMBER BOARD

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

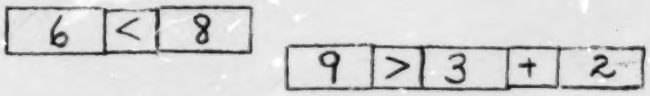
Using pink numeral cards and the green operation and relation symbol cards, have the student:

1. Make equations for any of the operations:



Numeration
B-34

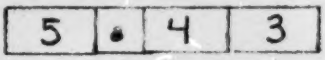
2. Use < or > symbol cards to indicate the relationship between two different numbers (or equations).



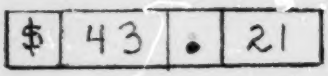
3. Use = ≠ symbol cards to indicate the relationship between two different numbers (or equations).

87 ≠ 78

4. Use . symbol card as a decimal point.



5. Use $ and . symbol cards.

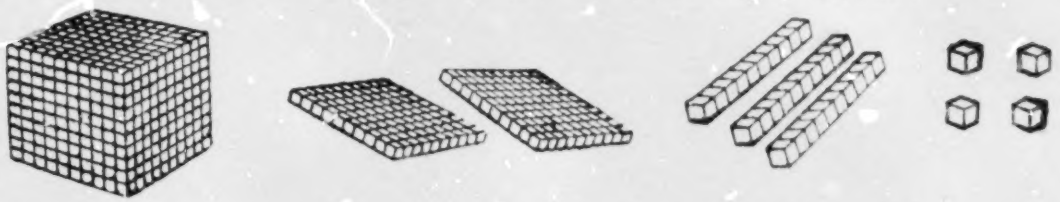


Teaching and Reinforcing Activities for Numeration

Using the yellow overlay cards and the yellow operation symbol cards, have the student:

Numeration
B-33 Tens
C-43 Hundreds
D-64 Thousands

1. Match the model (vacuum form) to the number cards:



1000	200	30	4

2. Demonstrate the expanded form of a numeral:

1000	+	200	+	30	+	4

Numeration
B-33a
B-64a

3. Form the standard numeral by overlaying the expanded numeral cards:

1	2	3	4

Numeration
B-31
B-34
C-51
C-52
C-62

4. Use the standard numeral and symbol cards ($>$, $<$, $=$, $\neq$) to show the relationship between two different numbers.

Numeration
B-35
C-46
D-65

5. Use the standard numerals to identify odd and even numbers.

Numeration
B-23
C-47
D-57

6. Use the numeral cards to demonstrate skip counting by 10's, 100's, and 1000's.

10	20	30	100	200	300	1000	2000	3000

Numeration
C-50
D-68

7. Round-off any numeral to the nearest ten, hundred, and thousands.

34

10	20	30	40	50	60	70	80	90

Teaching and Reinforcing Activities Using the Green Word Cards

Using the green word cards and pink numeral cards, have the student:

1. Match the number word to the numeral card.

twenty	-	six

26

Numeration A-19

2. Orally read the number word.

thirty	-	one

two	thousand	,	six	hundred	forty	-	seven

twenty	-	seven	and	thirty	-	five	hundredths

Numeration C-42

3. Use the cards | hundreds |, | tens |, | ones |.

to form a place value chart to use the models and/or numerals cards.

hundreds	tens	ones

4. Use the cards hundreds, tens, ones, tenths, hundredths to form a place value chart to use with models and/or numerals.

hundreds	tens	ones	tenths	hundredths

5. Use the number word cards with the numeral cards to demonstrate:

2	tens	7	ones	and	3	tenths	5	hundredths

cut cut cut

□		+
□□		−
□□		×
□□		÷
□□		>
□□		<
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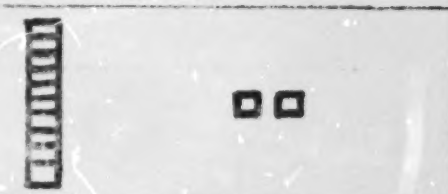
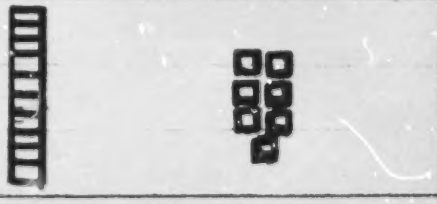
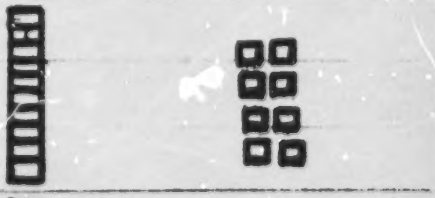
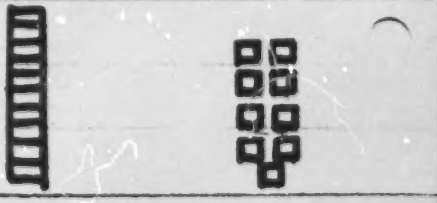
11	10 + 1	
12	10 + 2	
13	10 + 3	
14	10 + 4	
15	10 + 5	
16	10 + 6	
17	10 + 7	
18	10 + 8	
19	10 + 9	

cut

1000	6000
2000	7000
3000	8000
4000	9000
5000	

cut

100	600
200	700
300	800
400	900
500	

cut cut cut

1	0	0	1
2	0	2	3
3	0	4	5
4	0	6	7
5	0	8	9